

DETAILED ACTION

Election/Restrictions

1. Claim 13 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 02/29/08.

Information Disclosure Statement

2. The information disclosure statement filed 01/20/06 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because document 10016041A1 from Germany and the article by Motohide Takechi are not accompanied by a translation. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102 & 103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 8, 9, 11, 12, 14, 15 and 17-19 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wakiya et al. (WO/2002/035555 - the US equivalent 2004/0109995 is cited from hereon).

Wakiya et al. disclose a conductive coated particle that includes a metallic core that is surface treated with a carboxyl containing resin that is treated with an aziridine based agent (abstract, § 5-8, 12, 15-18, 30 and examples starting §54). Furthermore, Wakiya et al. disclose the features of a acrylic-styrene, epoxy and poly(meth)acrylic acid resin (§ 21) and an anisotropic conductive film which is construed to meet the limitation of adhesive (§2).

Accordingly, the reference of Wakiya et al. anticipates the material limitations of the listed claims.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims such as selection of a specific element such as a functional group or resin, it would have nonetheless been obvious to the skilled artisan to achieve the synthesis composition, as the reference teaches each of the claimed ingredients for the same utility and such modifications are recognized as being well within the purview of the skilled artisan to yield predictable results.

5. Claims 8-11, 14-17 and 19 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Soken Chem (JP 08-325543).

Soken Chem discloses an anisotropically electroconductive adhesive with metal based particles (abstract). Furthermore, Soken Chem discloses the features of acrylic and carboxyl

elements (§ 10-16), an epoxy component (§ 12) and surface treating the particles with applicant's aziridine compound (§ 42-46).

Accordingly, the reference of Soken Chem anticipates the material limitations of the listed claims.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims such as selection of a specific element such as a functional group or resin, it would have nonetheless been obvious to the skilled artisan to achieve the synthesis composition, as the reference teaches each of the claimed ingredients for the same utility and such modifications are recognized as being well within the purview of the skilled artisan to yield predictable results.

Claim Rejections - 35 USC § 103

6. Claims 8-12 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (US 5965064) in view of Soken Chem (JP 08-325543) or Mitsubishi (JP 09-030112) or Travis (US 3,985920).

Yamada et al. disclose an conductive particles coated with an insulator layer that comprises a resin with the carboxyl group (abstract, col. 4, lines 18-49, examples starting on col 13 and figures 1-7). Furthermore, Yamada et al. disclose the features of an anisotropically electroconductive adhesive (abstract) and acryl/styrene resins (col. 4, lines 39-47 and col 10, lines 1-10). However, Yamada et al. do not explicitly disclose the specific aziridine surface treatment. In an analogous art, Soken Chem, Mitsubishi or Travis discloses the features of surface treating a particle with applicants' aziridine compound is well-known (Soken Chem: §42-46), Mitsubishi: § 126, 127 and 139 and Travis: col 3, lines 29-41). One of ordinary skill in the art would have recognized that applying the known technique of surface treating with an aziridine compound would have yielded predictable results and resulted in an improved system.

It would have been recognized that applying the aziridine cross-linking technique to the teachings of Yamada et al. would have yielded predictable results because the level of ordinary skill in the art demonstrated by the references applied shows the ability to employ such features into similar systems. Further, the use of an aziridine would have been recognized by those of ordinary skill in the art as resulting in an improved composition that would allow for enhanced corss-linking and coupling properties.

7. Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakiya et al. in view of Soken Chem (JP 08-325543), Mitsubishi (JP 09-030112) or Travis (US 3,985920).

Wakiya et al. disclose the invention of claim 8 but Yamada et al. do not explicitly disclose the specific aziridine surface treatment. In an analogous art, Soken Chem, Mitsubishi or Travis discloses the features of surface treating a particle with applicants' aziridine compound is well-known (Soken Chem: §42-46), Mitsubishi: § 126, 127 and 139 and Travis: col 3, lines 29-41). Wakiya et al. invite such enhancement by teaching that the aziridine technique is well known (§ 30). One of ordinary skill in the art would have recognized that applying the known technique of surface treating with an aziridine compound would have yielded predictable results and resulted in an improved system. It would have been recognized that applying the aziridine cross-linking technique to the teachings of Wakiya et al. would have yielded predictable results because the level of ordinary skill in the art demonstrated by the references applied shows the ability to employ such features into similar systems. Further, the use of an aziridine would have been recognized by those of ordinary skill in the art as resulting in an improved composition that would allow for enhanced corss-linking and coupling properties.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Schottman et al. (US 2003/0203991) disclose various types of coating processes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri V. Nguyen whose telephone number is (571) 272-6965. The examiner can normally be reached on M-F 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisors, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. V. N./
Examiner, Art Unit 1796
April 18, 2008

/Mark Kopec/
Primary Examiner, Art Unit 1796